Dylan WongProfessor LutrickENG 102.1025 Composition II17 November 2018What do fuel prices, the environment, and the American obesity epidemic all have incommon? Or here’s one, what cost billions of dollars each year, yet is completely overlooked bythe American electorate? No these are not the start to a bad joke; the answer is agriculturalsubsidies. And despite being in place since the Land Act of 1820 and seeing little policy changesince the Great Depression, agricultural subsidies remain an area of controversy often neglectedby the American public. Agricultural subsidies have both literally and ethically polluted theagricultural market; by not only encouraging but rewarding overproduction. Agriculturalsubsidies have degraded our diets and been prone to scandal throughout their history. No cropbetter exemplifies all the above than corn; the “poster-child” for waste and corruption in theagricultural market. Corn is the most subsidized crop in America, therefore it is only appropriatethat it be the focus of this paper seeking to demonstrate the following. If Americans repealedsubsidies that encourage overproduction such as PLC’s and strengthened agricultural researchaimed to make food and soil more nutritious, the health of the agricultural market and consumerswould increase exponentially. Furthermore, the reason agriculture has not adapted in response torecent research, is because millions in farm-funded lobbying and the lack of awareness when itcomes to agricultural issues. Wong 2In order to truly examine the externalities and benefits of agricultural subsidies, it isimperative to define what qualifies as a subsidy and what types of subsidies are currentlyimplemented in American policy. Agriculture is an intrinsically broad term, anything from crops,to livestock, to national parks are considered agriculture. The word subsidy on the other hand hasa much more ridged definition; Merriam-Webster defines a subsidy as a “a grant by agovernment to a private person or company to assist an enterprise deemed advantageous to thepublic.” It should be starting to become clear what a broad area agricultural subsidies encompass,any grants given to farms, parks, or agrarian research qualify as a subsidy. The USDA provides amuch better context to the type of subsidies that are the main points of debate, among such are“Market Loss Assistance” and “Commodity Research and Promotion” (Topics). “Price LossCoverage” falls under the first type and is aimed to help farms from going out of business in theevent of huge market fluctuations, they seek to do this by refunding the margin farmers losewhen the value of their crop falls below a set market value. While the concept of PLC’s is noble,it has been very poorly executed historically, with farmers taking advantage of these payments,treating them as extra income. They do this by purposefully overproducing to increase the supplyof a given commodity in the market, thereby lowering its market value (which theirreimbursement is calculated from). Because larger farms have more land to overproduce on, theybenefit even more from this broken system, leading to a distribution of agricultural wealthupwards and making the agricultural market a fierce environment for small farms. Consumers receive the worst of the effects when it comes to subsidy inducedoverproduction. As Doctor Mark J Eisenberg points out “agricultural subsidies are worseningobesity trends in America” (Franck et al. 1). Agricultural subsidies are disproportionatelyWong 3awarded to crops such as corn which rate high on the glycemic index, meaning they cause morerapid increases in blood sugar compared to other carbohydrates. Because farmers are rewardedfor producing and overproducing corn, it has become ubiquitous in grocery stores items rangingfrom chewing gum to breakfast cereals. Dr. Eisenberg’s research links this saturation of corn tothe growing obesity rates in America. (4)Many medical professionals, such as Doctor Mark J. Eisenberg, acknowledge that“agricultural subsidies are worsening obesity trends in America” (Franck et al. 1). Eisenberg andcolleagues support this claim by analyzing how some of the most subsidized crops, such as corn,are processed by the human body. Their research demonstrates how many corn byproducts, suchas high fructose corn syrup, do not stimulate the production of insulin, causing imbalanced bloodsugar and higher risks for obesity and diabetes. The scope of these effects is affirmed andexpanded into the realm of livestock by filmmaker Robert Kenner’s research; he provides afirsthand look at the inhumane diets prescribed to farm animals. Kenner’s research furtherdemonstrates how this diet was shaped by historical agrarian practices and affirms the linkbetween subsidized corn and commodities eaten by consumers. However, people often point tothe research of biologists like Kevin D. Hall, which analyzes the complex “physiological andbehavioral” factors of obesity (1). Those opposed to Eisenberg’s claims believe that medicalprofessionals portray corn byproducts as the sole cause obesity, when in reality, the metabolicinfluences on obesity are much more dynamic and complex. The underlying flaw with both sidesmethods is neither consider which agricultural subsidies can or cannot being linked with obesity,thereby not analyzing current policy in a productive way. Wong 4It was stated earlier that corn would be a focus of this paper; partially due to thenutritional problems isolated to corn, but mostly due to corn’s dominance in America’sagricultural market and subsidy regime. Dr. Eisenberg’s research makes note that corn subsidiesmake up the largest portion of all subsidies and are paid out to the fewest recipients (4). Corn isthe tool most used to farm subsidies because it has one of the highest yields per acre of farm land(White 1). This low-risk high-reward quality of corn is why it has dominated everything fromfood to fuel (in the form of ethyl alcohol). One of the biggest flaws with the America’s currentsubsidies regime is that it encourages growing unhealthy carbohydrates as opposed to healthiergreens that take up more land and are less lucrative. If agricultural subsidies valued publichealth, they would seek to subsidize the margin farmers lose by producing healthier crops thatrequire more land to grow, rather than rewarding the overproduction of unhealthy starches. Unlike human consumers, livestock are the silent victims of agricultural subsidies. Forthe reasons listed above America produces more corn and unhealthy carbohydrates than weknow what to do with, and while it is not certain exactly how long farmers have been feedingcorn to livestock, the research of Dr. Baocheng Zhu and colleagues demonstrates how corn dietsalter the bacterial makeup of cattle digestive systems (Guo, 14). It is common knowledge thatcows on corn diets are less healthy and have higher fat to protein ratios than cows on grass fed ornatural diets. In summary, a repeal of agricultural subsidies would not only benefit the nutritionalvalue of the plants and animals we eat every day. Unfortunately, the advocacy for livestock iseclipsed by the power of corporate farming and millions of dollars in lobbing. Yet another silent victim of agricultural subsidies is the environment. Much of theliterature on agricultural subsidies also looks at the environmental externalities, i.e. unintendedWong 5consequences, associated with them. Those in favor of removing agricultural subsidies for thesake of biodiversity claim, “[agricultural subsidies] remove so much risk from farming that thereis little incentive to explore alternative production methods and alternative crops and livestockproducts that serve to enhance profitability and sustainability ” (Bruckner, 634). Plichman’sresearch however, finds there to be an acknowledgeable risk within any commodity crop (9).Furthermore, Plichman claims the difference in risk is what motivates farmers to overproducesingle crops, thus draining soils of nutrients. This is where biodiversity activists get involved;while the effects of nutrient depleted soil may be unapparent to the average American, the effectsof such are demonstrated in Dr. Štefan Bojnec’s research. Bojnec links the “size, subsidies, andperformance” of farms in Slovenia, his research suggests that subsidies cause a measurabledecease in the health of agrarian land which correlates to a drop in productivity (7). Dr.Lovelace’s research addresses the relationship between “ecology and the economy,” her claim isthat while our archaic subsidy system has a hand in facilitating environmental externalities, afree market would see the same issues (7).Under the current subsidy regime, farmers net the highest profits by producing a singlecrop year after year. In nature plants are constantly moving, wind and other forces migrate seedsand spread diversity in every ecosystem, so it should come as no shock that the artificial, staticenvironments we farm in, crops and soil become susceptible to problems such as nutrientdeplanement. The outrage amongst biodiversity activists is despite a knowledge of simplechanges that would benefit environmental health, many farmers are not willing to considermaking them, as they would lower their net profits. Doctor Maria-Soledad Benitez andcolleagues, have proposed crop rotation as one such solution to the problem of nutrient depletionWong 6in soil. Dr. Benitez’s research demonstrated that corn shoots grown in soil previously inhabitingsunflowers and peas, had larger biomass than shoots grow in soil previously inhabiting corn orsoybeans (10). In other words, if farmers rotate different types of crops amongst their land, theresult is not only better soil quality but also healthier, more nutritious plants. Thus, allocatingsome of the money from dangerous subsidies to incentivizing crop rotation amongst farmers,would create healthier ecosystems, healthier produce, and healthier business. Another type of agricultural subsidy, under the USDA’s definition established earlier, issubsidized research. Common knowledge would have it, research should be subsidized as foodand nutrition should be held to a higher standard than other fields. While this is true in theoryagricultural research is compromising and focusing on the wrong things. Dr. Donald R. Davis’research demonstrated a decrease in the nutritional value of our raw produce over the last fiftyyears (8). As Dr. Davis points out, agricultural research has always focused on “yields, growthrate and pest resistance” as opposed to nutrient density and viability (Davis 12). Whilesubsidized research has the potential to be beneficial, in its current state it is only hindering ourprogress towards healthier foods. Genetically Modified Organisms are another controversial areaagricultural research is invested in; GMOs have been proven to contribute to the problem ofnutrient deficiency in produce, as GMOs are currently being utilized and optimized to growlarger vegetables. Neither the plants, nor the soil, can supplement the nutritional requirements ofthese larger vegetables we grow to keep up with demand. On many fronts agricultural research isin a bad state; putting the interest of profit driven farmers over the dietary needs of consumers,such a broken system has business receiving federal funding. One final example demonstratingthe absurdity of agricultural research is examined by Dr R Guy Reeve’s research, in which heWong 7analyses a Congress funded research project seeking to turn mosquitos into gene altering“weapons” (1). Once again, I do concede that, unlike many other types of agricultural subsidies,research grants have a potential to be very beneficial to public health. However, their power mustbe utilized wisely, the government should award grants according to a sort of “merit” gaged byhow beneficial said research would be to consumer health. If we made such a change, hugeadvances could be made towards creating healthier food for our growing population. One might question why policy regarding agricultural subsidies has seen such minimalchange; this stagnancy is rooted in the rhetoric around agricultural subsidies. The debate overwhether or not agricultural subsidies belong in America’s modern agricultural market, is mostaccurately characterized by two dominant groups. On one side are conservative economists whoargue the externalities, i.e. unintended consequences, of an archaic subsidy regime demonstratethe need to remove them from the annual budget. Opposing this view are lobbyists who claimthat agricultural subsidies are both historically and economically justified; in both cases thoseinvolved in the debate want to see our current, post-depression agricultural policy changed. However, both sides push for all-or-nothing reform, and with few attempts at compromise byboth parties it is clear that unless the discussion around agrarian policy changes, the market willbe bound to the cyclical and self-destructive subsidies in place currently. Joel Salatin put it best, when it comes to agricultural subsidies America’s been “hittingthe bull’s-eye of the wrong target” (Kenner). Our lack of attention to the government’sinvolvement in the agricultural market has caused a snowball effect in which, corn became themost lucrative crop for farmers to produce, supermarkets became potent with corn by-products,livestock grew less nutritious on corn diets, etc. All these effects are ignored by the AmericanWong 8public and concealed by thousands of dollars in farm campaigns, but the effects are catching upto us. Agricultural subsidies have shaped modern farming practices into a beast, ferociouslyconsuming arable soil, extorting the government, and slowly overtaking our dinner tables. Oncegood intentions have now become a tragedy. But not all hope is lost, if America was to make arepeal corn subsidies and PLC’s the market would flourish: it would become easier for smallfarmers to enter, livestock and consumers would become more nourished, and the quality ofarable farmlands across the country would become rejuvenated. But repeal alone is not enough toundo this mess seventy plus years in the making, a fraction of the billions annually being spenton corn should go towards incentives for farmers to grow healthier produce and conserve soilnutrient levels. This all may sound like speculation, but many countries have already undergonethis very same reformation. A Yale case study examines the effects of New Zealand’s removal ofagricultural subsidies;Immediately after dismantling its subsidy regime, farmers were afraid and furious,marching on the capitol in protest. However, despite predictions that 10 percent of itsfarms would go bankrupt, New Zealand retained 99 percent of its farms. Herds wereconsolidated, and breeds that reflected market demand—producing leaner milk, forinstance—rose to prominence. And benefits to the land were dramatic. Pesticide usedeclined by 50 percent. Soil erosion, land clearing, and overstocking also declined. Theentire agricultural sector was forced to shift toward better practices that increasedefficiency and yield. Livestock farming, previously stimulated by output subsidies, wascurbed and, for the most part, relocated away from erodible hillsides to more sustainablepastures. (Removal of…)Wong 9The list of benefits is innumerable; however, it is up to the American electorate to removeagricultural subsidies from policy.